

**CLAIMS**

What is claimed is:

1. An apparatus comprising:
  - a demand order module including a set of products to be shipped to a target location;
  - an order guideline module including a set of constraints for a shipment from one of a set of a source locations to the target location;
  - a route determination module to select the set of source locations having the set of products based on a cost factor and a utilization of a capacity of a set of transports; and
  - a processing device to execute the route determination module.
2. The apparatus of claim 1, further comprising:
  - a storage device to store at least one of the demand order module, order guideline module, and the route determination module.
3. The apparatus of claim 1, further comprising:
  - a loading module to simulate a loading of the shipment of the set of products into the set of transports.
4. A method comprising:
  - identifying a set of source locations having a set of desired resources for a target location;
  - prioritizing a set of shipping rule groups based on a cost factor associated with the set of source locations and the target location; and
  - selecting a subset of the set of source locations and a subset of the shipping rule groups based on the cost factor and a utilization of a capacity of a set of transports.
5. The method of claim 4, wherein selecting comprises:
  - searching iteratively through the set of shipping rule groups in order of priority for a shipping solution.

6. The method of claim 4, wherein selecting comprises:  
simulating iteratively the fulfillment of each group of the set of shipping rules in priority order until the set of desired resources is loaded into the set of transportation units.
7. The method of claim 4, wherein the set of shipping rule groups includes a default group of shipping rules.
8. The method of claim 4, wherein the utilization of the capacity of the set of transports is a maximum utilization.
9. The method of claim 4, further comprising:  
altering a size of a shipment to utilize a maximum capacity of the set of transports.
10. An apparatus comprising:  
a means for determining a set of source locations of a set of resources;  
a means for ordering a set of shipping rule groups based on a cost of shipping to a target location from the set of source locations; and  
a means for selecting a subset of shipping rule groups based on the cost of shipping the set of resources from a subset of the set of source locations to the target location and utilization of a set of transports.
11. The apparatus of claim 10, further comprising:  
a means for simulating the loading of the set of transports.
12. The apparatus of claim 10, wherein the set of shipping rule groups includes a default shipping rule group.
13. The apparatus of claim 10, further comprising:  
a means for determining all source locations having the set of resources.

14. A machine readable medium containing therein a set of instructions which when executed cause a machine to perform a set of operations comprising:

identifying a set of source locations having a set of products for a target location;

prioritizing a set of order guidelines based on a cost factor for shipping the set of products from the set of source locations to the target location; and

determining a subset of order guidelines based on the cost factor and utilization of a capacity of a set of transports.

15. The machine readable medium of claim 14, having further instructions stored therein, which when executed cause a machine to perform a set of operations, further comprising:

searching iteratively through the set of order guidelines in order of priority for a shipping solution.

16. The machine readable medium of claim 14, wherein the set of order guidelines includes a default order guideline.

17. The machine readable medium of claim 14, wherein determining comprises:

simulating iteratively the fulfillment of each order guideline from the set of order guidelines in priority order until the set of resources is loaded into the set of transports.

18. The machine readable medium of claim 16, wherein no product of the set of products is associated with more than one default order guideline.

19. The machine medium of claim 14, having further instructions stored therein, which when executed cause a machine to perform a set of operations, further comprising:

altering a size of a shipment to utilize a maximum capacity of the set of transports.